

Center for Instructional Technology annual update for 2006-07

Last update 8/13/07

The CIT has had a busy and productive year supporting a growing number of instructional technology projects and exploring a variety of new technologies relevant to higher education. CIT staff continue to work closely with a wide range of individuals within the Library, with groups across the Duke campus and with the community beyond Duke.

This document describes CIT's major activities during the past year. For information about CIT plans for the 2007-08 year, see the CIT Strategic Plan for 2007-2011 on the CIT's website: <http://cit.duke.edu>. More information about CIT's activities during the past year is available in the Reports section of the CIT website.

I. CIT Consulting and Outreach

CIT Consulting increased 30% over last year.

In 2006-07 CIT consulted on over 1100 inquiries, information requests, and faculty projects, a 30% increase over 2005-06 CIT support volume. These consultations ranged from quick answers and referrals to campus services, to queries requiring several hours of research, to semester- or year-long projects. Faculty, staff and students in all Duke schools, as well as from outside Duke contacted CIT via telephone, email and web forms. CIT staff consulted in faculty offices or departments whenever possible. Sample consulting requests include:

- Requests for exploratory equipment loans and training, consultation on best practices with these technologies
- Help creating videos to be used by students to prepare for science lab work
- Consulting on best ways to collect student assignments in Blackboard
- Interview with instructional technology staff at small liberal arts college in the Midwest about how they can best implement a podcasting program
- Training in Google Earth for a group of faculty and graduate students in NSOE, here and at the Marine Station
- Help in the CIT lab with editing audio files recorded on an iPod, to produce a podcast of course presentations
- Help supporting a group of faculty working to integrate tablet PCs into their courses, which included pedagogical and technical planning help, assistance in and observations of actual class sessions, technical trouble-shooting, and evaluation support
- Requests from reporters and other schools for information, consulting or training on technologies in use at Duke
- Question about recording a phone conversation on an iPod

Use of CIT facilities tripled for consulting, project and course support.

The CIT lab supported 34 visits in Fall 2006 and 89 visits in Spring 2007, with the increase reflecting more publicity and easier access through drop-in hours.

The language labs hosted over 400 class sessions in its computer labs, over 200 class sessions in its multimedia viewing room and processed 250 equipment loans of laptops and digital video cameras to language instructors and programs. The language labs also served as the circulation point for 50 digital video kits loaned to 90 student groups as part of the Duke Digital Initiative.

CIT staff gathered information about instructional technology needs through departmental activities, new faculty contacts and ongoing meetings with faculty.

CIT staff and student workers made 42 Blackboard office visits to faculty and 14 iPod office visits for faculty teaching with iPods.

Each CIT consultant worked directly with faculty and IT staff in a specific discipline. Consultants contacted some department chairs with a detailed report about instructional technology activities of faculty in their departments, while inquiring about ways CIT could be of assistance. CIT staff also attended departmental events, followed up on

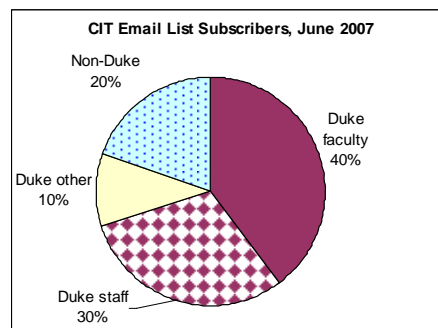
earlier inquiries from the faculty, arranged departmental drop-in office hours and met departmental IT staff for coffee and discussion.

In May 2007 we began the new Faculty Ambassadors Program, the purpose of which is to create a group of faculty who meet regularly with CIT, to whom we provide up-to-the-minute information about Duke instructional technologies, and who inform us about faculty needs in their departments.

CIT's monthly email news provided information about instructional technology, teaching resources and project support opportunities.

Over 522 individuals have subscribed to the CIT's newsletter to get information about project examples, technology trends, useful teaching resources, upcoming instructional technology events and current CIT support opportunities.

Duke subscribers include 207 faculty and 159 staff. Non-Duke subscribers include faculty and staff from 64 institutions of higher education in the US and 12 other countries.



CIT staff shared their expertise with Duke and with a national audience through conference presentations, discussions with other schools, publications and contacts with the press.

CIT staff attended and gave presentations at local events, such as Duke's Podcasting Academy and the UNC Teaching and Learning with Technology conference, as well as at national events such as the Blackboard Developers conference, Educause, the American College and Research Library association meeting and the Association for the Advancement of Computers in Education E-Learn conference. For a full list of staff activities, see Appendix B.

More information/links on CIT Consulting and Outreach:

Sample projects supported by CIT consultants: <http://library.duke.edu/blogs/citprofiles/>

Overview of CIT consulting services: <http://cit.duke.edu/help/consult/index.html>

Professional activities of CIT staff: <http://cit.duke.edu/reports/activities.html>

CIT newsletters: <http://cit.duke.edu/news/newsletters>

II. Project Grants and Project Support

A new visualization grant program supported over 6 projects in diverse subjects.

In response to a growing area of interest, CIT offered a new Visualization Incentive Grant program in Spring 2007, leading to support of six projects and consulting on additional proposals. Supported projects:

- Using Google Earth and digital maps to enhance understanding of the history of Durham, NC (History)
- Scanning images of Dante's Paradiso, to enhance student understanding of that text (Romance Studies)
- Using Google Earth and other tools to visualize value chains of North Carolina businesses (Sociology)
- Using a GPS/accelerometer device, perhaps in conjunction with Google Maps, to record and visualize spatial data related to lemur movement (Biological Anthropology and Anatomy)
- Developing a 3D immersive model of the brain using Duke's Immersive Virtual Environment (DiVE) to visualize pharmacological principles of brain chemicals (Pharmacology and Cancer Biology)
- Exploring aspects of teaching in Second Life virtual world (Information Science)

A total of \$25,350 was awarded for these six projects; awardees also receive consulting and training as needed from CIT staff throughout their grant period. Additional project proposals are under development.

CIT awarded six Jump Start Grants to help instructors investigate a new technology or develop proof-of-concept projects.

CIT received 7 applications for these grants; four were supported via this grant program, two were supported via other programs, and one was withdrawn (see Appendix A). These grants provided a total of \$5,800 in direct costs as well as student worker assistance, training, and consulting (technical and pedagogical) to support projects such as developing portions of an online math textbook, creating a virtual Tabernacle in the DiVE facility, and developing an effective e-portfolio process for residents in the Medical School.

Five faculty received Conference Travel Grants to present their instructional technology projects at peer-reviewed academic conferences.

Total funding was \$2,000 for presentations by four faculty at such events as the "National Organization of Nurse Practitioner Faculties Annual Meeting" and the "4th International Conference on Computer Assisted Systems for Teaching & Learning Japanese."

A new Materials Development Program assisted faculty with developing digital materials for their courses.

New this year, the Materials Development program provided faculty with project management and technical expertise, student worker time, and scheduled access to CIT facilities for digital materials production. Projects included Introductory Physics Lab videos and short video segments to spotlight faculty research interests in the Economics Department (the EcoTube project).

Two CIT-supported Faculty IT Fellows groups received extended consulting and peer support for experimenting with new technologies.

- Seven law school clinical faculty explored the integration of video technology into their teaching.

In December 2006, a group of seven law school clinical faculty completed a year-long fellowship exploring the integration of video technology into their teaching of client interviewing and counseling skills. Their project resulted in the development and implementation of permission forms for client recording and client interview; counseling rubrics used by for assessment; and a survey instrument enabling faculty to gather student reflections on the impact of the clinic experience on their skill development. In cooperation with local staff, these faculty also created three demonstration videos used in training. The faculty are continuing dialogue with CIT consultants in 2007-08 on selectively using video technology in student feedback and other ideas arising from their fellowship.

- Six faculty in Engineering and one in Computer Science investigated the use of tablet PCs.

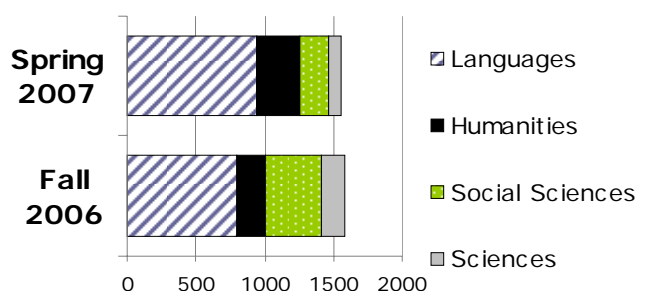
During the 2006-2007 academic year, a group of six faculty in Engineering plus one from Computer Science investigated the use of tablet PCs in teaching through a CIT Instructional Technology Fellowship, seeking to connect theoretical lecture material and practical applications that students need to be successful. The team identified excellent uses of tablet PCs in class, both for students and for instructors. Faculty experimented with different presentation software, and all liked the ability to write while facing the students, to use color, and to save their notes. Several faculty stated that incorporating the technology encouraged them to rethink their course and their teaching objectives, and become more focused on student learning. When the students also used tablets, there were hurdles to effective student use including logistical and technical problems which were not attributable to the tablets themselves. However, there were definite gains in student engagement, and the majority of students responded positively.

CIT partnered with the Office of Information Technology and Arts & Sciences Information Science and Technology to carry out the Duke Digital Initiative.

Activities included:

- iPods: supported use of iPods in over 250 course sections and 2500 students.
- Tablet PCs: supported 14 instructors of 16

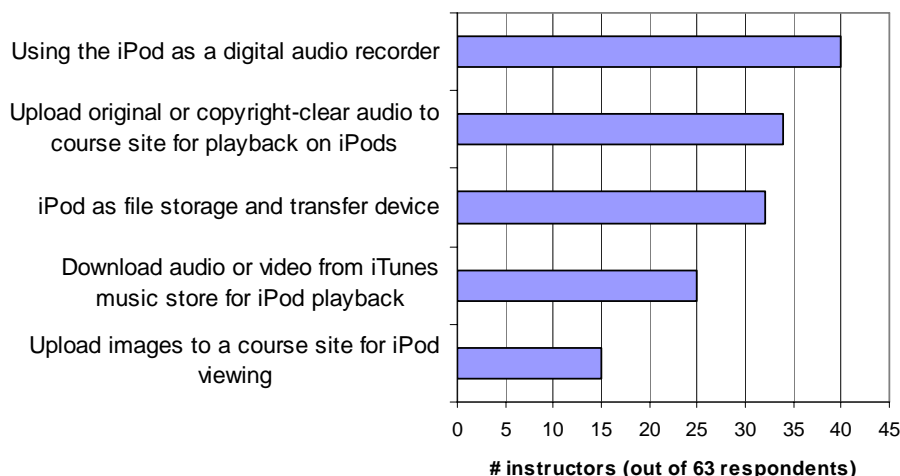
iPod course enrollment AY06-07



courses in Humanities, Social Sciences, Science and Engineering disciplines using tablet PC's to enhance presentation and in some cases also by students to increase classroom interaction and integrate problem-based learning.

- Video projects: supported video production projects in over 280 students and 12 different instructors for 21 course sections.

Relative frequency of sample instructional iPod uses



Results of the DDI Instructional Programs in 2006-07 included:

- Increased usage and authoring of digital multimedia resources, including significant growth in the use of podcasts as a source of course content. The wide availability of iPods and increased availability of digital video equipment increased authoring and sharing of multimedia content by faculty and students.
- Successful and increasing use of tablet PCs and iPods for enhanced classroom presentation and multimedia display. A large majority of faculty reported high levels of satisfaction in their use of tablet PCs and iPods for improving classroom presentations.
- Broader use of multimedia for major student course projects. This increased multimedia use was connected to reports of increased student motivation, more integration of original source materials into student work, greater use of authentic cultural materials, and better overall quality of student work.

More information on CIT project grants and project support:

CIT funding and grants programs information: <http://cit.duke.edu/help/grants/index.html>

Sample projects: <http://library.duke.edu/blogs/citprofiles/>

DDI Support for the 2007-08 Academic Year: <http://cit.duke.edu/help/ddi/programs.html>

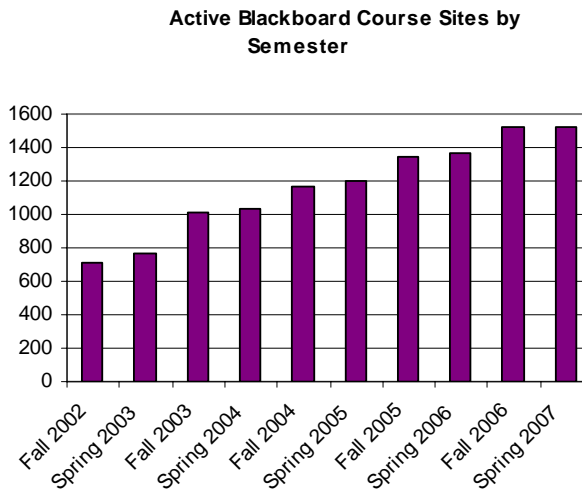
General DDI program information: <http://www.duke.edu/ddi/>

2006-07 report on DDI instructional programs: http://cit.duke.edu/pdf/ddisummary_0607.pdf

III. Academic Tools Exploration and Support

CIT, in conjunction with OIT and the Library, supported growing use of the Blackboard Learning Management System.

In Arts & Sciences, 80% of regular rank faculty had one or more active Blackboard course websites between fall 2005- spring 2007. Faculty also used Blackboard course websites in Engineering, Divinity, Law, Nursing, School of Medicine and the School of the Environment. Across all schools, there were 1520



active Blackboard course sites in Spring 2007 semester, about 13% more than in Spring 2006.

Blackboard disk space usage doubled from September 2005 to September 2006, and doubled again from September 2006 to May 2007, driven by the growing use of multimedia in courses. Usage is now over 0.8 terabytes.

CIT and OIT improved Blackboard functionality and better integrated Blackboard with other campus services.

Upgraded Blackboard to version 6.3 for Fall 2006, which provided:

- Enhanced Course Menu and Map
- Smarter Gradebook Calculations
- Multi-language support for Romance languages and German
- Adaptive release and Review Status (customized learning paths)
- Syllabus Builder
- Enhanced Assessment features, including better support for downloading detailed results for analysis.

Integrated Lectoria and Personal Response System into Blackboard

Began planning integration with iTunes U and Elluminate.

Added *Ask a Librarian* link into course site templates.

Improved accessibility and security of e-reserves within Blackboard.

CIT begin planning the transition from the pilot test of Brownstone EDU to a more supported product with similar functionality.

Brownstone EDU – a software tool pilot tested in the Pratt School of Engineering – was acquired by Wimba, with further development of that product put on hold. Neal Caidin, Shawn Miller, and Feri Zsuppan (A&SIST) are leading an effort to explore alternate tools that provide equivalent levels of math and algorithm support, working in close consultation with faculty from Economics and Engineering, the biggest users of these features.

CIT explored a variety of new technologies for their potential value in teaching and learning.

New technology explorations included:

- **Sony Reader** - 18 librarians, library systems staff, and CIT staff participated in a pilot of the Sony Reader, a portable ebook reader that uses paper-like display technology ("eInk"). In this pilot led by Randy Riddle (CIT) and Anne Langley (Public Services), staff evaluated the potential opportunities and challenges in academic use of this technology by exploring pre-loaded content including 25 e-books as well as .pdf, MP3, and image files.
- **Tools for Creating and Using Digital Media** – CIT staff investigated tools that can support the growing use of digital media in teaching and learning including Handbrake, Flip4mac, JumpCut, Snapz Pro, Eyespot, Fraps, ProfCast, Snapkast, Joost, Mojito and several new portable media devices and camera equipment. Of particular interest at this time are tools that combine digital media editing and Web 2.0 collaborative and tagging features, as with YouTube, VideoEgg and others.
- **Tools for creating flash cards and review materials** – In response to a popular consulting request, CIT staff explored tools supporting the use of flashcards on computers or on iPods, including Respondus StudyMate, iFlash, iQuiz and PowerPoint. Staff also experimented with enhanced media editing tools such as GarageBand to add audio narrations to flash cards.
- **Virtual Worlds** – CIT staff hosted demonstrations and discussion sessions on Second Life and its potential for teaching and learning
- **Google Earth/Maps** - CIT has been helping faculty explore Google Earth as a teaching tool. We have offered several well-attended introductory workshops, as well as providing one-on-one hands-on help for specific projects. Our visualization grants are supporting projects in which Google Earth plays a major part. We are investigating and planning a workshop for Google Maps.
- **SoftChalk Lesson Builder** – The CIT lab now includes this tool for creating interactive learning content that can be distributed on the web or through Blackboard. SoftChalk was included in a workshop series focusing on easy ways to enhance presentations and content delivery in Blackboard.
- **Calibrated Peer Review** – Seven Duke faculty have accounts to use CPR, a tool which facilitates student peer review of writing assignments. The tool is hosted by UCLA; accounts are available through CIT.

- **Wimba Voice Tools** – CIT Staff evaluated these tools for adding a built-in, easy to use voice recording virtually anywhere in a Blackboard course space. Wimba Voice Tools will be pilot tested in 2007-08 as part of the Duke Digital Initiative.

More information on Academic Tools/Links

Blackboard website: <http://blackboard.duke.edu>

Blackboard Advisory Group with Meeting Minutes: <http://blackboard.duke.edu/about/advisory.do>

CIT Tools information: <http://cit.duke.edu/tools>

IV. Training and Events

180 Duke faculty and 200 Duke staff attended at least one CIT event in 2006-07.

Faculty, staff and graduate students attended 94 different sessions of 61 different workshops, presentations, and other events hosted by CIT in 2006-07.

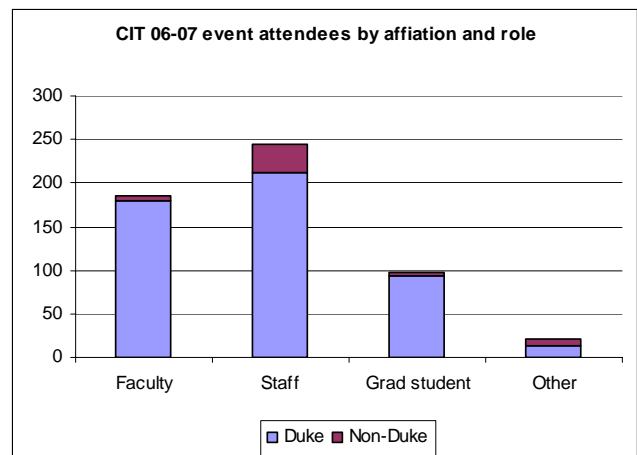
Formats included hands on training, small group tutorials, guest speakers, brown bag discussion groups and our signature event, the 7th annual Instructional Technology Showcase.

Technologies featured included Blackboard, iPods and iTunes U, multimedia creation, Google Earth and Second Life in teaching and learning, Gaming for Learning and 3D Visualization and the Duke Immersive Virtual Environment (DiVE)

180 different faculty attended at least one CIT event in 2006-07 (133 A&S, 30 Health Sciences, 13 Engineering, 2 Law, 2 Divinity).

The CIT Showcase drew a large audience and highlighted successful faculty projects in many different subject areas.

CIT sponsors an annual day-long instructional technology showcase event at which Duke faculty and staff present the latest and most successful uses of technology for teaching and learning through a series of presentations, discussions, and posters. Over 225 faculty and staff attended this year's CIT Showcase, held on April 26, 2007. The event was coordinated by Amy Campbell and Shawn Miller from CIT. The event featured eleven sessions, 35 poster presentations, and a keynote on Teaching in Flexible Learning Spaces.



More information/links on CIT Events:

CIT Showcase 2007: <http://cit.duke.edu/showcase/2007>

CIT Events for Fall 2007: <http://cit.duke.edu/events/eventsreg.do>

Below: Duke faculty present their instructional technology projects at the 2007 CIT Showcase



Appendix A: 2006-07 Jump Start Grants

(in chronological order of application)

Faculty name	Department	School	Proposal description	Funding Request	Outcome
Bray, Clark	Mathematics	A&S	Plans to develop the first few chapters of an online math text book, asks for funding to support student worker	\$2,500	Proposal approved
Portier-Young, Anatheia	Divinity	Divinity	Enlivening large introductory class with group activities, and visualizations	\$0 (offered the option of up to \$1,700 for DiVE exploration if needed, but this was not funded via this grant	Proposal approved
Van Tuyl, JoAnne	Slavic and Eurasian Studies	A&S	Creating audiovisual materials for beginning and intermediate Russian	N/A	Supported via a different CIT channel (IMLTS group)
Portier-Young, Anatheia	Divinity	Divinity	Creating a virtual tabernacle using the DiVE, for students in a large intro course	\$3,325	Proposal approved
Malkin, Bob	Biomedical Engineering	Pratt	Using drawing tablets and PDAs as graphical input and feedback devices by students		Proposal withdrawn
Bryson, Diane	English for International Students	Graduate School	filming interviews with members from Ayamara communities to understand the relationship between their oral traditions and the written Spanish and Ayamara languages.	N/A	Supported via a different CIT channel (IMLTS group)
Nagler, Alisa	Graduate Medical Education	Medicine	Three departments working with GME will transition from hard copy portfolios to an electronic format.	\$0 (asking only consulting time and advice from CIT)	Proposal supported

Appendix B: CIT Staff Professional Activities for 2006-07 (in chronological order)

Neal Caidin attended the Blackboard Developer's Conference and also helped plan and facilitate OSCELOT Open Source Day July 25-26, 2006, in Washington, DC. OCELOT is an open source community for learning objects.

Lenore Ramm attended the Blackboard Developer's Conference and the OSCELOT Open Source Day July 25-26, 2006, in Washington, DC.

Lynne O'Brien presented *Institutional Podcasting and Media Sharing* at the Educause Directors Leadership Seminar in Snowmass, CO, Aug. 8, 2006, along with Victoria Szabo from Stanford and Tom Lewis from the University of Washington.

Yvonne Belanger presented *Tools for Creating a Culture of Assessment: The CIPP Model and Utilization-focused Evaluation* at the Association of Research Libraries' Library Assessment Conference: Building Effective, Practical, Sustainable Assessment, Sept. 25 – 27, 2006 in Charlottesville, VA.

Kirk Griffin attended the Podcasting and Portable Media Conference (which included the Podcast Academy 4), Sept. 29 - Oct. 2, 2006, Ontario, CA

Yvonne Belanger, Lynne O'Brien and **Samantha Earp** presented *Transitioning Academic Technologies from Experimentation to Institutional Support* at Educause, Oct. 9, 2006 in Dallas, TX. **Andrea Novicki** also attended this conference.

Hugh Crumley gave presentations on *Adoption of ETDs at Duke University* and *Instructional Technology Training for Graduate Students* at the E-Learn (Association for the Advancement of Computers in Education) 11th Annual Conference, Oct. 13-17, 2006 in Honolulu, Hawaii.

Haiyan Zhou presented *Online Core in Clinical Research (OCCR): Initial Design, Ongoing Development, and Improvement* at the E-Learn (Association for the Advancement of Computers in Education) 11th Annual Conference, Oct. 13-17, 2006 in Honolulu, Hawaii.

Amy Campbell attended the Professional and Organizational Development Network (POD) conference, Oct. 25-30, 2006, in Portland, OR. POD is an organization for faculty development professionals.

Haiyan Zhou presented *The "Grounded Design" Effect: The Impact of Grounded Instructional Design Principles and Beyond* at the 12th annual Sloan-C International conference on Asynchronous Learning Networks, Nov. 8-10, Orlando, FL.

Neal Caidin attended the Blackboard Southeast Users Group for Transaction System Conference, November 15, 2006, at Elon University.

Samantha Earp gave the keynote presentation at the East Carolina University iPod Institute, January 25, 2007.

Andrea Novicki attended Podcast Academy V, February 14-15, 2007, at Duke University.

Amy Campbell gave two invited workshops titled *Bringing the Power of the Library to your Online Course* for the Tri-State College Library Cooperative (TCLC), February 22, 2007 in Philadelphia, PA.

Randy A. Riddle and **Andrea Novicki** attended the UNC Teaching and Learning with Technology Conference, March 21 - 23, 2007, in Raleigh, NC.

Yvonne Belanger and **Samantha Earp** gave a presentation on *Assessment-Driven Models for Implementation and Adoption of Emerging Technologies* at the UNC Teaching and Learning with Technology Conference, March 21 - 23, 2007, in Raleigh, NC.

Lynne O'Brien participated in the Executive Roundtable at the Coalition of Networked Information meeting in Phoenix, AZ April 15-18, 2007.

Amy Campbell, **Neal Caidin** and **Lenore Ramm** represented CIT at the Tri-IT meeting, May 2, 2007, at UNC Greensboro.

Yvonne Belanger attended a one day workshop, *Performance Measures in Academic Libraries* as part of the Evidence-based Library and Information Practice conference, May 11, 2007, in Raleigh, NC.

Shawn Miller presented *The Hybrid Academy: Building and Sustaining a Culture of Use* as part of a half-day workshop titled Technological Ecologies: Methods, Modes and Assessment at the Computers and Writing conference, May 16-19, 2007 in Detroit, MI.

Lynne O'Brien presented *Podcasting and Digital Media in Education: New Possibilities for Teaching and Learning* at Boston College's E-Learning Day, May 16, 2007, in Boston, MA.

Samantha Earp presented two half-day workshops - *Implementing an iPod program for language learning*; and *Strategic Planning for Language Technology Support in a Ubiquitous Media World* - at the biennial conference of the International Association for Language Learning Technology, June 26-30, 2007 at Tufts University in Medford, MA.